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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 92-NM-161-AD; Amendment 39-8634; AD 93-14-10]

Airworthiness Directives; Boeing 737-200 and -300 Series Airplanes

Related AD

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 737 series airplanes, that currently requires structural inspections to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door and repair of cracked parts, and provides an optional modification, which, if installed, would terminate the repetitive inspections required by that AD. This amendment requires repetitive inspections to continue after installation of the optional modification. This amendment is prompted by a structural reassessment of the Model 737 series airplane. The actions specified by this AD are intended to prevent the development of undetected frame cracking, which could result in rapid loss of cabin pressure.

DATES: Effective [insert date 30 days after date of publication in the **Federal Register**].

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of [insert date 30 days after date of publication in the **Federal Register**].

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Thomas Rodriguez, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2779; fax (206) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations by superseding AD 87-06-08 R1, Amendment 39-5763 (52 FR 41703, October 30, 1987), which is applicable to certain Model 737 series airplanes, was published in the **Federal Register** on February 17, 1993 (58 FR 8719). The action proposed to require structural inspections to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door and repair of cracked parts, and to provide an optional modification. The action also proposed to require additional repetitive inspections after the previously-considered "terminating modification" or repair has been accomplished.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

One commenter supports the proposed rule.

The Air Transport Association (ATA) of America, on behalf of several of its members, requests that AD 87-06-08 R1 be revised, rather than superseded. The commenter believes that it is considerably easier for operators to track their paperwork and minimize the risk of clerical error, if the basic AD number remains unchanged. The commenter suggests that, in order for the AD number to have any significance, the AD should be revised, not superseded, whenever the applicable service bulletin is revised. The FAA does not concur. The FAA's current policy (reference FAA Order 8040.1B) is that, whenever a "substantive change" is made to an existing AD, the AD must be superseded, rather than revised. "Substantive changes" are those made to any instruction or reference that affects the substance of the AD, and includes part numbers, service bulletin and manual references, compliance times, methods of compliance, corrective action, inspection requirements, and effective dates. In the case of this AD rulemaking action, the changes being made to the existing AD are considered substantive.

This superseding AD is assigned a new amendment number and new AD number; the previous amendment is deleted from the system. Because maintenance records frequently omit the revision suffix, supersedure is appropriate where it is necessary to ensure that maintenance records will clearly identify which version of the AD has been complied with. Since the change in this AD adds repetitive inspections following incorporation of the optional modification under the previously issued AD, the new AD must be issued as a supersedure. This will ensure that any future maintenance record will identify the new AD number to

indicate that the additional repetitive inspections were performed

following incorporation of the optional modification. This procedure facilitates the efforts of the FAA's Principal Maintenance Inspectors in tracking AD's and ensuring that the affected operators have incorporated the latest changes into their maintenance programs.

Further, with regard to administrative costs (paperwork changes) to affected operators, Federal Aviation Regulations (FAR) Section 121.380(a)(2)(v), "Maintenance recording requirements," requires that persons holding an operating certificate and operating under FAR Part 121 must keep records "indicating the current status of applicable airworthiness directives, including the method of compliance." Whether an existing AD is superseded or revised, the new AD is assigned a new AD number: a superseding AD is assigned a new 6-digit AD number; a revising AD retains the original 6-digit AD number, but an "R1" is added to it. In either case, the new AD is identified by its "new" AD number, not by the "old" AD number. In light of this, affected operators updating their maintenance records to indicate the current AD status would have to record a new AD number in all cases, regardless of whether the AD is a superseding or a revising AD. Further, operators are always given credit for work previously performed in accordance with the existing AD by means of the phrase in the compliance section of the AD that states, "Required...unless accomplished previously."

The same commenter requests that, since the modification and crack repairs provided in paragraph (c)(1) of the proposal are already mandated by the "Structural Modification AD" [reference AD 90-06-02, Amendment 39-6489, (55 FR 8372, March 7, 1990)], then the modification

and crack repairs that would be required by the proposed AD should be approved as an alternative method of compliance for AD 90-06-02. The FAA concurs that the modification and crack repairs provided by paragraph (b)(1) of this final rule are identical to those required by AD 90-06-02, as described in Boeing Service Bulletin 737-53-1096. Accordingly, the FAA has added a new "Note" to this final rule, stating that compliance with the requirements of paragraph (b)(1) constitutes compliance for the modification and crack repair recommendations of Boeing Service Bulletin 737-53-1096, as mandated by AD 90-06-02.

Boeing Commercial Airplane Group requests that the historical background statement be changed in the Summary of the preamble to the notice to indicate that the action was prompted by a structural reassessment of aging Model 737 series airplanes, which was conducted by the Boeing Model 737 Structures Working Group (part of the Airworthiness Assurance Task Force). The commenter states that the Structures Working Group recommended incorporation of the Flight Safety Addendum inspection program described in Revisions 4 and 5 of Boeing Service Bulletin 737-53-1096. The commenter also mentions that incorporation of the Flight Safety Addendum inspection program is described in the 737 Supplemental Structural Inspection Document (SSID) D6-37089, and mandated by AD 84-21-06 R1 [amendment 39-5813, (53 FR 6794, March 3, 1988)]. That AD was issued to ensure safe operation of Model 737 series airplanes throughout their operational life. The FAA concurs that clarification of the background information is necessary. The wording of the Summary section of the preamble to the final rule has been

revised accordingly.

The same commenter requests that paragraph (e) of the proposal should refer to the Flight Safety Addendum included in Boeing Service Bulletin 737-53-1096. The FAA does not concur. The FAA infers that the commenter believes that reference to the Flight Safety Addendum in paragraph (e) of the proposal would clarify the requirements of this AD. However, the FAA has determined that it is not necessary to refer to the addendum, since the requirements of the Flight Safety Inspection Program are incorporated in paragraph (e) of the final rule.

The same commenter contends that the requirements of paragraphs (a) and (b) of the proposal are redundant, since both paragraphs require repetitive close visual inspections to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door in accordance with Boeing Service Bulletin 737-53-1096. The FAA concurs. The FAA infers that the commenter would prefer to incorporate the contents of paragraphs (a) and (b) of the proposal into one paragraph. The FAA has determined that the repetitive detailed visual inspections to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door are identical in all versions of Boeing Service Bulletin 737-53-1096. Therefore, the contents of paragraphs (a) and (b) of the proposal have been combined into paragraph (a) of the final rule. The paragraph structure of the final rule has been reformatted accordingly.

Paragraph (d) of the final rule has been revised to clarify that the inspection area includes the forward and aft body frames adjacent to the aft lower cargo door.

After careful review of the available data, including the comments

noted above, the FAA has determined that air safety and the public

interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

There are approximately 1,198 Model 737-200 and -300 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 464 airplanes of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per airplane to accomplish the required actions, and that the average labor rate is $55 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be $102,080, or $220 per airplane. This total cost figure assumes that no operator has yet accomplished the requirements of this AD.

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities

under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 14 CFR part 39 of the Federal Aviation Regulations as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89.

§39.13 - [Amended]

2. Section 39.13 is amended by removing amendment 39-5763 (52 FR 41703, October 30, 1987), and by adding a new airworthiness directive (AD), amendment 39-8634, to read as follows:

93-14-10 BOEING: Amendment 39-8634. Docket 92-NM-161-AD. Supersedes AD 87-06-08 R1, Amendment 39-5763.

Applicability: Model 737-200 and -300 series airplanes, line numbers 6 through 1204, inclusive; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

NOTE 1: Paragraph (a) of this AD restates the requirements of paragraph (a) of AD 87-06-08 R1, amendment 39-5763. As allowed by the phrase, "unless accomplished previously," if the requirements of paragraph (a) of AD 87-06-08 R1 have been accomplished previously, paragraph (a) of this AD does not require that they be repeated.

To prevent the development of undetected frame cracking, which could result in rapid loss of cabin pressure, accomplish the following:

(a) Prior to the accumulation of 20,000 landings, or within 1,000 landings after December 17, 1987 (the effective date of AD 87-06-08 R1, amendment 39-5763), whichever occurs later, unless previously accomplished within the last 3,000 landings prior to December 17, 1987, conduct a close visual inspection to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door, in accordance with Boeing Service Bulletin 737-53-1096, dated July 24, 1986; or Revision 1, dated April 2, 1987; or Revision 2, dated July 30, 1987; or Revision 3, dated February 8, 1990; or Revision 4, dated February 14, 1991; or Revision 5, dated January 16, 1992. Thereafter, repeat the detailed visual inspections at intervals not to exceed 4,000 landings.

(b) If any crack is detected during any of the inspections required by this AD, prior to further flight, accomplish the requirements of paragraph (b)(1) or (b)(2) of this AD, as applicable:

(1) Modify or repair the crack in accordance with Boeing Service Bulletin 737-53-1096, Revision 1, dated April 2, 1987; or Revision 2, dated July 30, 1987; or Revision 3, dated February 8, 1990; or

Revision 4, dated February 14, 1991; or Revision 5, dated January 16, 1992. After modification or repair, accomplish the requirements of paragraph (d) of this AD.

NOTE 2: Compliance with the requirements of paragraph (b)(1) of this AD constitutes compliance for the modification and crack repair recommendations of Boeing Service Bulletin 737-53-1096, as mandated by AD 90-06-02, amendment 39-6489.

(2) If any crack is found that does not exceed the limits specified in the Boeing 737 Structural Repair Manual (SRM), the crack may be temporarily repaired in accordance with the SRM. After such repair is accomplished, repeat the close visual inspections required by paragraph (a) of this AD at intervals not to exceed 4,000 landings until modification or repair is accomplished in accordance with the service bulletins specified in paragraph (b)(1) of this AD. After such modification or repair, accomplish the requirements of paragraph (d) of this AD.

(c) If no crack is detected during any of the inspections required by this AD, repeat the close visual inspections required by paragraph (a) of this AD at intervals not to exceed 4,000 landings until modified in accordance with Boeing Service Bulletin 737-53-1096, Revision 1, dated April 2, 1987; or Revision 2, dated July 30, 1987; or Revision 3, dated February 8, 1990; or Revision 4, dated February 14, 1991; or Revision 5, dated January 16, 1992. After modification, accomplish the requirements of paragraph (d) of this AD.

(d) For any area that is modified or repaired in accordance with Boeing Service Bulletin 737-53-1096, initial release, dated July 24, 1986; Revision 1, dated April 2, 1987; Revision 2, dated July 30, 1987; Revision 3, dated February 8, 1990; Revision 4, dated February 14, 1991; or Revision 5, dated January 16, 1992: Prior to the accumulation of 28,000 landings after the modification or repair has been accomplished, or within 1,000 landings after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 4,000 landings, conduct a detailed visual inspection to detect cracks of the forward and aft body frames adjacent to the aft lower cargo door, in accordance with the service bulletin.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(f) Special flight permits may be issued in accordance with FAR 21.197 and 21.199 to operate the airplane to a location where the requirements of this AD can be accomplished.

(g) The inspections, modification, and repairs shall be done in accordance with Boeing Service Bulletin 737-53-1096, initial release,

dated July 24, 1986; or Boeing Service Bulletin 737-53-1096, Revision 1,

dated April 2, 1987; or Boeing Service Bulletin 737-53-1096, Revision 2, dated July 30, 1987; or Boeing Service Bulletin 737-53-1096, Revision 3, dated February 8, 1990; or Boeing Service Bulletin 737-53-1096, Revision 4, dated February 14, 1991; or Boeing Service Bulletin 737-53-1096, Revision 5, dated January 16, 1992, as applicable. Revision 2 of Boeing Service Bulletin 737-53-1096 contains the specified effective pages:

Page Number	Shown on Page	Date Shown on Page
1-2, 4-18, 23	2	July 30, 1987
3, 19-22, 24	1	April 2, 1987

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on [insert date 30 days after date of publication in the **Federal Register**].

Issued in Renton, Washington, on July 14, 1993.

Original Signed By:

David G. Hmiel, Acting Manager,
Transport Airplane Directorate,